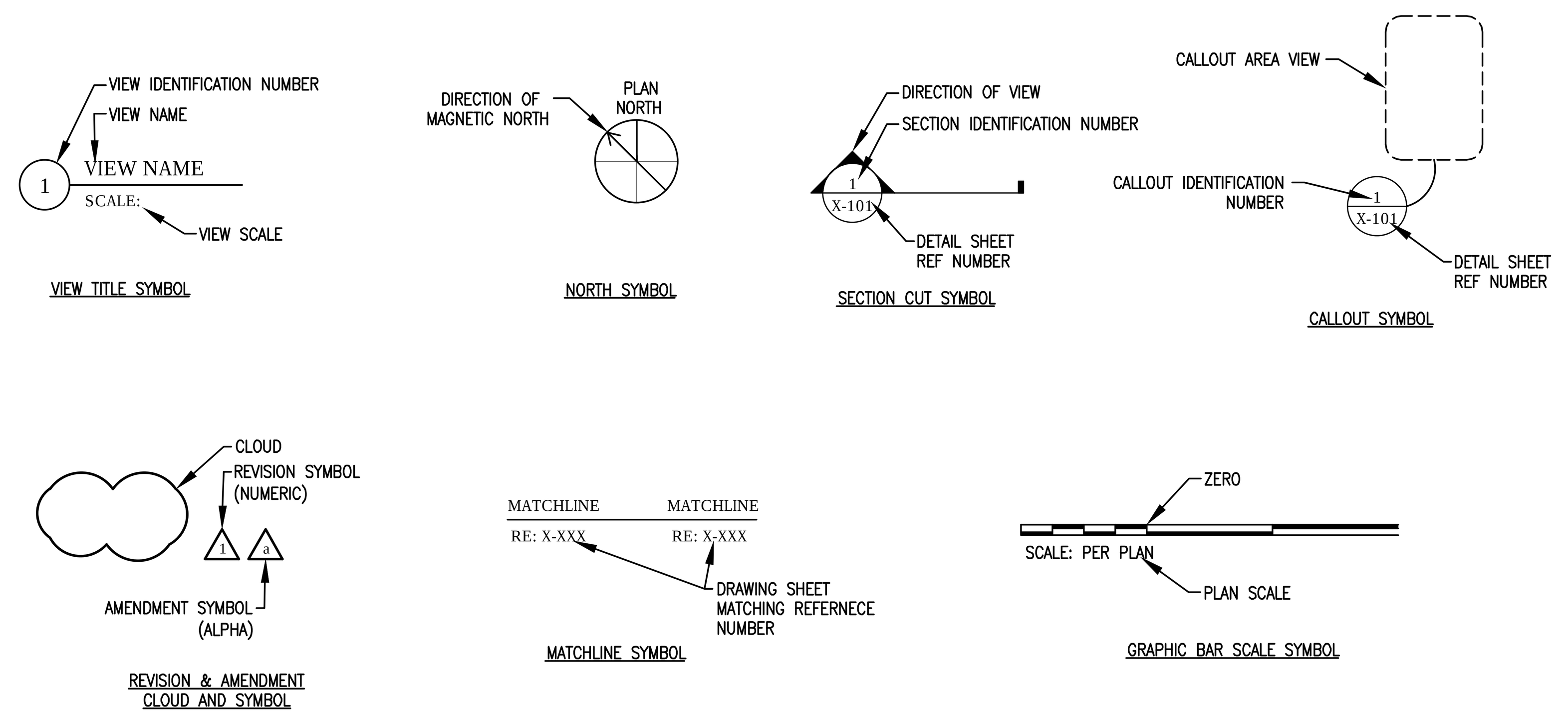
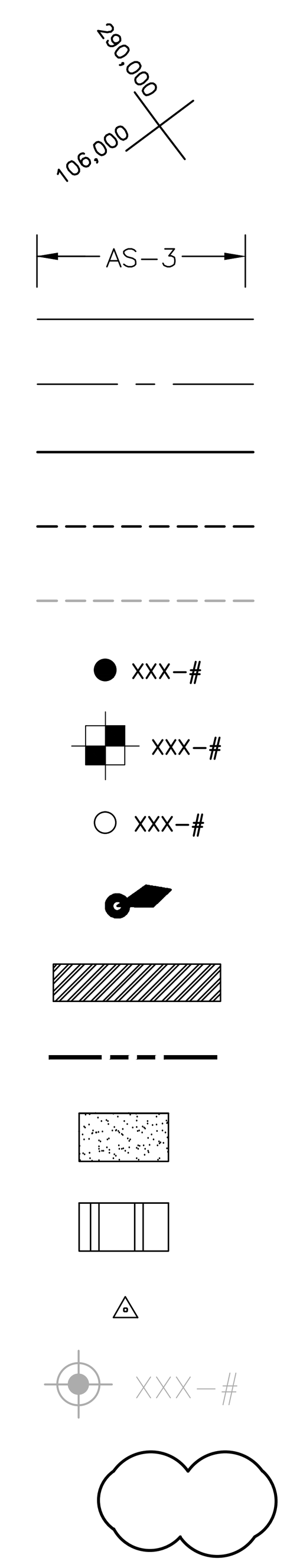
SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

DRAWING SHEET SYMBOLS



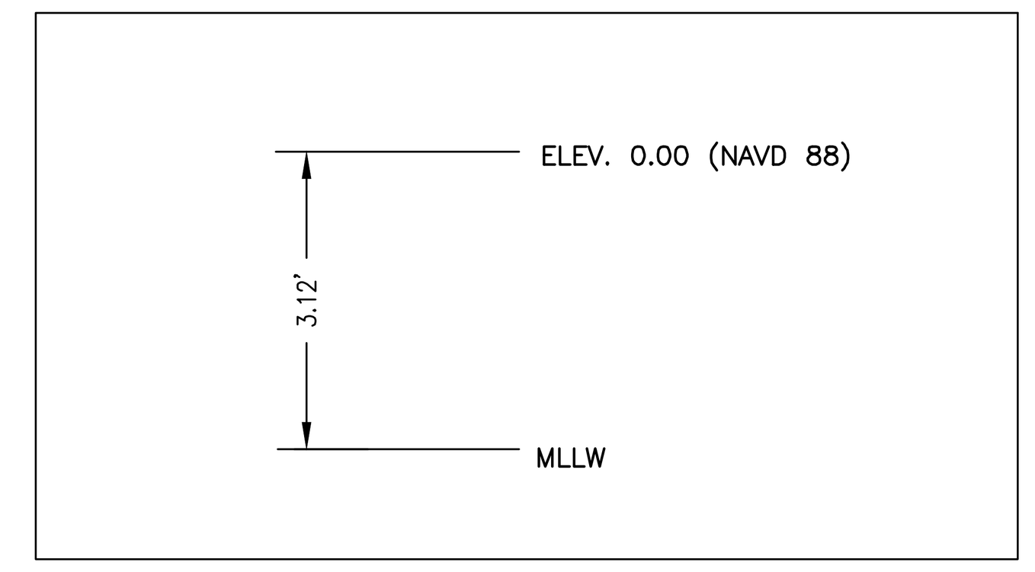
DREDGING LEGEND



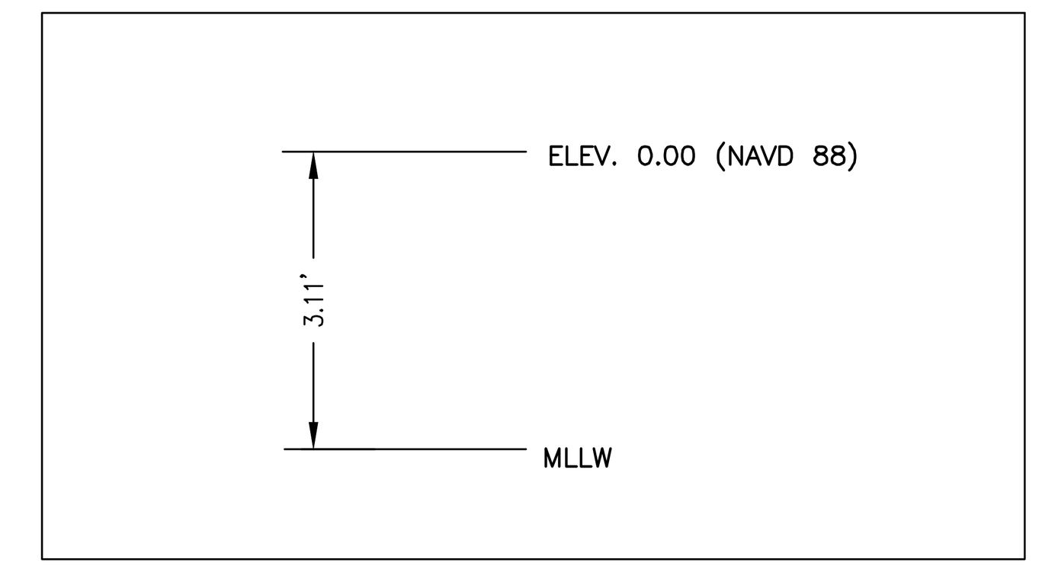
HORIZONTAL CONTROL GRID W/COORDINATES
ACCEPTANCE SECTION LIMITS W/NO.
CHANNEL LIMITS
CHANNEL CENTERLINE
45' DEPTH CONTOUR
46' DEPTH CONTOUR
EXISTING UTILITY
VIBRACORE DATA LOCATION W/IDENTIFIER
TEST PIT LOCATION W/IDENTIFIER
SEDIMENT SAMPLE LOCATION W/IDENTIFIER
BUOY MARKERS
APPROXIMATE LOCATIONS OF WORK
APPROXIMATE LOCATION OF FORT MIFFLIN D.A.
REQUIRED DREDGING
ALLOWABLE DREDGING
SURVEY MONUMENT
PIEZOMETER

ABBREVIATIONS

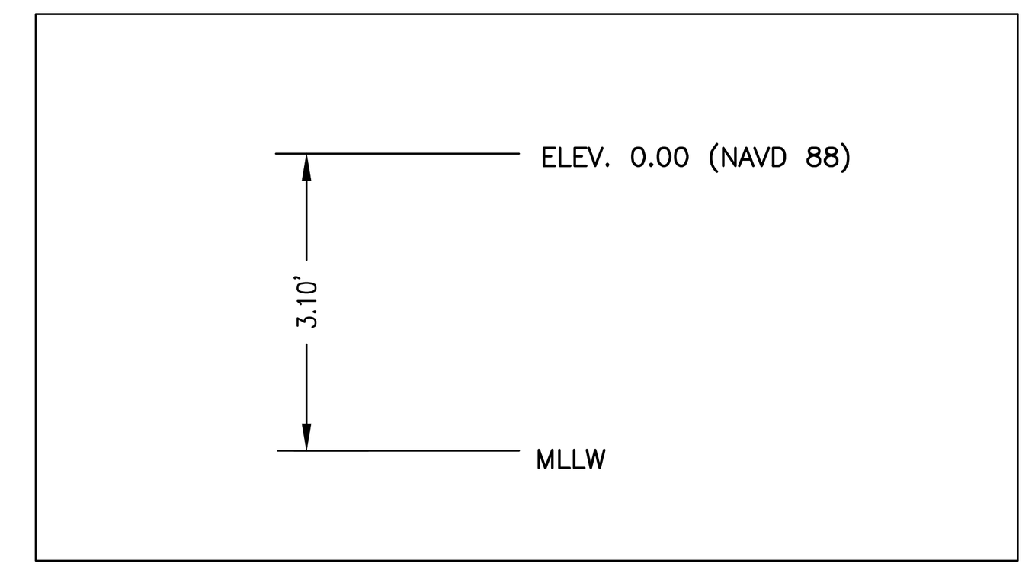
ABBRV	DESCRIPTION	ABBRV	DESCRIPTION	ABBRV	DESCRIPTION
AD	AREA DRAIN	FF	FINISHED FLOOR	PSI	POUNDS PER SQUARE INCH
ADDL	ADDITIONAL	FIN	FINISH	PVI	POST INDICATOR VALVE
AFF	ABOVE FINISHED FLOOR	FL	FLOOR	RAD	RADIUS
BD	BOARD	FM	FORCE MAIN	REINF	REINFORCEMENT
BIT	BITUMINOUS	FT	FOOT, FEET	REM	REMOVABLE
BL	BASE LINE	FTG	FOOTING	ROW	RIGHT OF WAY
BLDG	BUILDING	G	GROUND	S	SOUTH
BM	BEAM	GOVT	GOVERNMENT	SCH	SCHEDULE
BMP	BEST MANAGEMENT PRACTICE	GR	GRADE	SECT	SECTION
BOT	BOTTOM	HORIZ	HORIZONTAL	SPEC	SPECIFICATION
BVCE	BEGINNING OF VERTICAL CURVE ELEVATION	HS	HIGH STRENGTH	SPRT	SUPPORT
BVCS	BEGINNING OF VERTICAL CURVE STATION	HT	HEIGHT	SQ	SQUARE
CMU	CONCRETE MASONRY UNIT	HVY	HEAVY	SST	STAINLESS STEEL
CO	CLEAN OUT	IN	INCH	STA	STATION
COL	COLUMN	INSUL	INSULATION, INSULATED	STD	STANDARD
CONC	CONCRETE	IINT	INTERIOR	STRUCT	STRUCTURAL
CONSTR	CONSTRUCTION	INV	INVERT	SUSP	SUSPENDED
CONT	CONTINUOUS	LL	LIVE LOAD	SYS	SYSTEM
CTRL	CONTROL	LP	LOW POINT	TEMP	TEMPORARY
CWL	CONTRACTOR WORK LIMITS	LT	LIGHT	TD	TRENCH DRAIN
DET	DETAIL	LVC	LENGTH OF VERTICAL CURVE	TDO	TRENCH DRAIN OUTLET PIPE
DGA	DENSE GRADED AGGREGATE	JCT	JUNCTION	TELE	TELEPHONE
DIA	DIAMETER	MATL	MATERIAL	TOPO	TOPOGRAPHY
DIM	DIMENSION	MAX	MAXIMUM	TYP	TYPICAL
DL	DEAD LOAD	MIN	MINIMUM	UD	UNDERDRAIN
DWG	DRAWING	MISC	MISCELLANEOUS	UDO	UNDERDRAIN OUTLET PIPE
E	EAST	MLLW	MEAN LOWER LOW WATER	UE	UNDERGROUND ELECTRIC
EA	EACH	N	NORTH	UGND	UNDERGROUND
ECM	EROSION CONTROL MAT	NLT	NOT LESS THAN	UNO	UNLESS NOTED OTHERWISE
EJ	EXPANSION JOINT	NTS	NOT TO SCALE	UOP	UNDERDRAIN OUTLET PIPE
EL	ELEVATION	OC	ORIGINAL CONSTRUCTION	UXO	UNEXPLODED ORDINANCE
ELEC	ELECTRIC	OD	OUTSIDE DIAMETER	VB	VINYL BASE
EOP	EDGE OF PAVEMENT	OH	OVERHEAD	VC	VERTICAL CURVE
EOS	EDGE OF SHOULDER	OPG	OPENING	VCT	VINYL COMPOSITION TILE
EQ	EQUAL	OPP	OPPOSITE	VOL	VOLUME
EQUIP	EQUIPMENT	PC	POINT OF CURVE	VERT	VERTICAL
EXH	EXHAUST	PD	PAVEMENT DRAIN	VTR	VENT THROUGH ROOF
EXIST	EXISTING	PI	POINT OF INFLECTION	W/	WITH
EXP	EXPANSION, EXPOSED	PI	POINT OF INFLECTION	W	WEST
EXP JT	EXPANSION JOINT	PIV	POINT OF VERTICAL INFLECTION	WL	WATER LEVEL
EXT	EXTERIOR	POT	POINT OF TANGENT	WS	WATER SURFACE
FIG	FIGURE SINGLE	PMP	PROBABLE MAXIMUM PRECIPITATION	W/O	WITHOUT
FDTN	FOUNDATION	PNL	PANEL		
		PSF	POUNDS PER SQUARE FOOT		



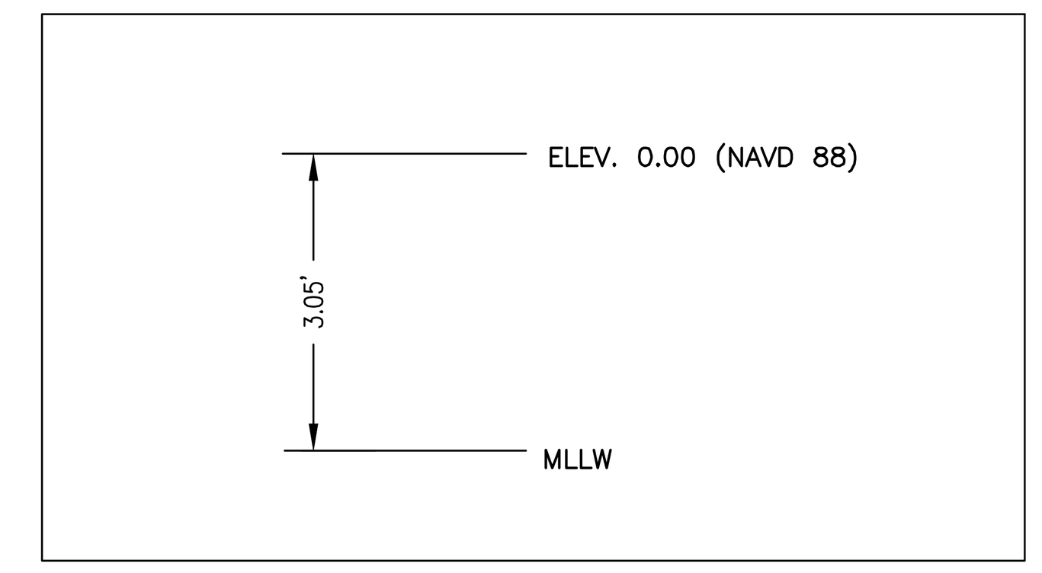
DELAWARE RIVER TIDE REFERENCE
STA. 19+547.79 TO STA. 25+528.28
N.T.S.



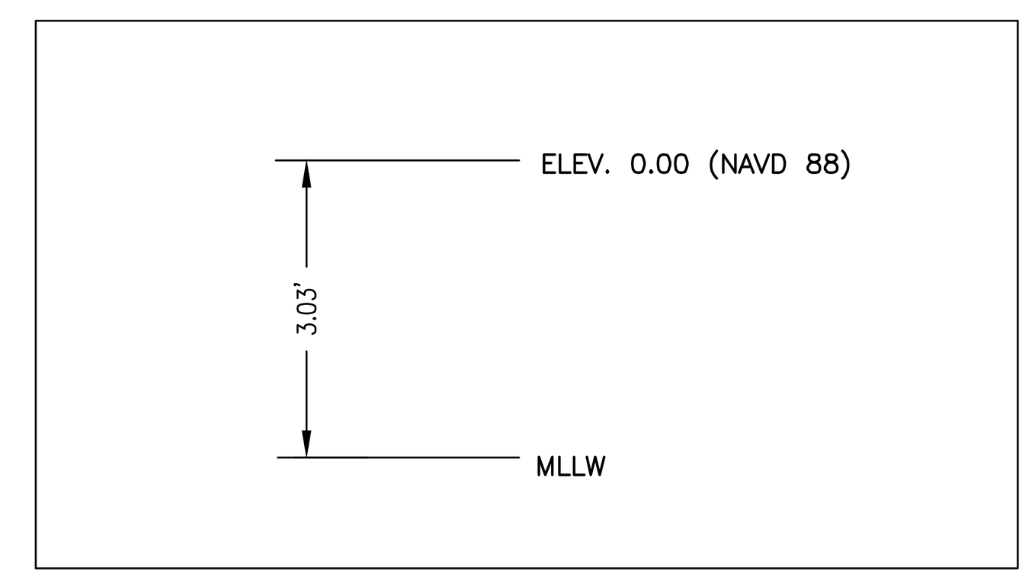
DELAWARE RIVER TIDE REFERENCE
STA. 25+528.28 TO STA.32+754.80
N.T.S.



DELAWARE RIVER TIDE REFERENCE
STA. 32+754.80 TO STA. 38+208.82
N.T.S.



DELAWARE RIVER TIDE REFERENCE
STA. 72+574.21 TO STA. 79+567.60
N.T.S.



DELAWARE RIVER TIDE REFERENCE
STA. 79+567.60 TO STA. 97+983.58
N.T.S.

GENERAL DREDGING NOTES:

1. SURVEY MEETS STANDARDS AS OUTLINED IN CORPS OF ENGINEERS' HYDROGRAPHIC SURVEY MANUAL EM 1110-2-1003, DATED JANUARY 1, 2002 FOR NAVIGATION AND DREDGING SUPPORT SURVEYS.
2. SOUNDINGS ARE EXPRESSED IN FEET AND TENTHS AND REFER TO MEAN LOWER LOW WATER (MLLW). SEE DETAILS ON THIS SHEET FOR THE TIDAL REFERENCE FROM NOAA'S TIDAL EPOCH – 1983-2001.
3. HORIZONTAL CONTROL IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM, ZONE 2900, U.S. FOOT (NAD 1983).
4. THE EXISTING CHANNEL DEPTHS ARE A RESULT OF SURVEYS CONDUCTED IN MAY/JUNE OF 2013, AND CAN ONLY BE CONSIDERED REPRESENTATIVE OF THE CONDITIONS OCCURRING AT THAT TIME. THE SURVEY DATES HAVE BEEN INDICATED ON THE DREDGING PLAN SHEETS.
5. SOUNDINGS WERE SELECTED FOR PLOTTING PURPOSES ONLY, USING THE MINIMUM DEPTH WITHIN A 30'x30' CELL, AND SHIFTED TO THE CELL'S CENTER. COASTAL OCEANOGRAPHIC'S HYPACK MATRIX PROGRAM WAS USED TO PERFORM THE SOUNDING SELECTION.
6. THE POSITIONS OF THE AIDS TO NAVIGATION ARE PROVIDED FOR INFORMATION ONLY, AND SHOULD NOT BE USED FOR NAVIGATION.
7. FOR RECENT AND HISTORIC SUBSURFACE INFORMATION SEE SPECIFICATIONS SECTIONS 007340 AND 007343, RESPECTIVELY.

DISPOSAL AREA GENERAL NOTES:

1. THE FOLLOWING APPLY TO ALL DELAWARE RIVER DISPOSAL AREAS:
   - A. THE END OF ALL DISCHARGE PIPES SHALL BE LOCATED INSIDE THE DISPOSAL AREA LIMITS AS SPECIFIED IN SPEC SECTION 35 20 23. PIPE SHALL BE LOCATED SUCH THAT THE DISCHARGE DOES NOT SCOUR THE SLOPE FACE OR THE TOE-OF-SLOPE IN THE VICINITY OF THE DISCHARGE AREA.
   - B. BORROW FOR DIKING MATERIAL MAY BE OBTAINED FROM WITHIN THE DISPOSAL AREAS, BUT NOT CLOSER THAN 50 FEET FROM THE INSIDE TOE OF THE DIKE SECTIONS.
   - C. THE LOCATIONS OF THE EXISTING INSTRUMENTATION (I.E., MONITORING WELLS, ETC.) ARE APPROXIMATE. IF CONTRACTOR IS UNABLE TO LOCATE THE EXISTING INSTRUMENTATION, THE COR SHALL BE NOTIFIED PRIOR TO BEGINNING WORK IN THAT AREA. THE CONTRACTOR SHALL NOT DISTURB EXISTING INSTRUMENTATION. ANY COSTS FOR REPAIR AND/OR REPLACEMENT OF INSTRUMENTATION SHALL BE INCURRED BY THE CONTRACTOR. DIKES SHALL NOT BE CUT WITHIN 100' OF EXISTING INSTRUMENTATION.
   - D. TOPOGRAPHY SHOWN IS BASED ON AERIAL PHOTOGRAPHY DATED MAY 2007 AND CAN ONLY BE CONSIDERED INDICATIVE OF THE SITE CONDITIONS AS THEY EXISTED AT THAT TIME. SIGNIFICANT EARTHWORK HAS BEEN PERFORMED IN THE DISPOSAL AREA SINCE THE DATE OF SURVEY. THE CONTRACTOR IS ENCOURAGED TO VISIT THE SITES WHERE WORK IS TO BE PERFORMED TO ACQUAINT THEMSELVES WITH EXISTING CONDITIONS THAT COULD AFFECT PROJECT COST.
2. FOR DREDGE PIPE CROSSING DETAIL, SEE SHEET C-206.
3. CONTRACTOR SHALL ENSURE THAT DREDGE DISCHARGE PIPES ARE PLACED ON THE FINGER DIKES PROVIDED WITHIN THE DISCHARGE LIMITS SPECIFIED FOR THE DISPOSAL AREAS, OR OTHERWISE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS.
4. HORIZONTAL DATUM– NEW JERSEY STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM, 1983 ADJUSTMENT.
5. VERTICAL DATUM– ELEVATIONS REFERENCED TO NORTH AMERICAN VERTICAL DATUM, 1988.

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MARK	ACTION	DESCRIPTION	DATE	BY
a	AM 0001	REVISED LEGEND	08/16/13	MKP

U.S. ARMY CORPS OF ENGINEERS
PHILADELPHIA DISTRICT
PHILADELPHIA, PA 19107-3390
www.nap.usace.army.mil

DWN BY: MKP | DESIGNED BY: MKP | ISSUE/RELEASE DATE: 100% 08/08/2013
CKD BY: DAN | REVIEWED BY: TEH | PROJ. NUMBER: -
SOLICITATION NUMBER: IFB W912BU-13-B-0019
CONTRACT NUMBER: -
DWG SCALE: N.T.S.
DWG. SIZE: 30"x42" Arch E1 | FILE NAME: C-001.dwg

DELAWARE RIVER MAIN CHANNEL DEEPENING
PENNSYLVANIA, NEW JERSEY & DELAWARE
DREDGING
GENERAL INFORMATION SHEET

SHEET NUMBER
C-001

WEST CHANNEL EDGE

DELAWARE RIVER

1 PLAN - FORT MIFFLIN OFFLOAD AREA
SCALE: 1"=50'

25 0 25 50 100
SCALE IN FEET

a NOTES:

1. HORIZONTAL DATUM– NEW JERSEY STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM, 1983 ADJUSTMENT.
2. VERTICAL DATUM– ELEVATIONS REFERENCED TO NORTH AMERICAN VERTICAL DATUM, 1988.
3. THE EXISTING RIVER DEPTHS AND UPLAND ELEVATIONS ARE THE RESULTS OF SURVEYS CONDUCTED IN JULY 2013 AND CAN ONLY BE CONSIDERED REPRESENTATIVE OF THE CONDITIONS OCCURRING AT THAT TIME.
4. THE SOUTH PIER IS NOT AVAILABLE FOR USE IN THIS CONTRACT. THE CONTRACTOR MAY USE THE NORTH SIDE OF THE NORTH PIER FOR MECHANICALLY OFFLOADING OF MATERIAL. ALL WORK WITHIN THE SITE SHALL BE COORDINATED WITH JIM AMADIO, OPERATIONS DIVISION, AND APPROVED BY THE COR.

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MARK	ACTION	DESCRIPTION	DATE	BY
a	AM 0001	REMOVED CRANE & COBBLE/BOULDER PLACEMENT AREAS, REVISED NOTES.	08/16/13	MKP

U.S. ARMY CORPS OF ENGINEERS
PHILADELPHIA DISTRICT
PHILADELPHIA, PA 19107-3390
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DWN BY: MKP	DESIGNED BY: MKP	ISSUE/RELEASE DATE: 100% 08/08/2013
CKD BY: DAN	REVIEWED BY: TEH	PROJ. NUMBER: .
		SOLICITATION NUMBER: IFB W912BU-13-B-0019
DWG SCALE: 1"=50'		CONTRACT NUMBER: .
DWG. SIZE: 30"x42" Arch E1	FILE NAME: C-207 FT MIFFLIN OFFLOAD AREA.dwg	

DELAWARE RIVER MAIN CHANNEL DEEPENING
PENNSYLVANIA, NEW JERSEY & DELAWARE

DREDGING

PLAN - FORT MIFFLIN OFFLOAD AREA

SHEET NUMBER
C-207